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May 3, 2004

VIA ELECTRONIC FILING

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
236 Massachusetts Avenue, N.E.
Suite 110
Washington, DC 20002

Re: Ex Parte Presentation
In the Matter of Second Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television Notice of Proposed Rulemaking, MB Docket No. 03-15

Dear Ms. Dortch:

On Thursday, April 29, 2004, copies of the attached documents relating to Distributed Transmission Technology were e-mailed on behalf of The Merrill Weiss Group to Jonathan Cody of Chairman Powell's office and Johanna Mikes-Shelton of Commissioner Adelstein's office.

Pursuant to section 1.1206 of the Commission's rules, one copy of this letter and the attached documents are being filed electronically in the above-referenced docket. Please direct any questions regarding this matter to the undersigned.

Sincerely yours,

Thomas P. Van Wazer

cc: Jonathan Cody (via e-mail w/o attachment)
Johanna Mikes-Shelton (via e-mail w/o attachment)

June 6, 2002

Ex Parte Letter

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Re: MM Docket 00-39, Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television

Dear Ms. Dortch:

The undersigned 17 organizations, including television broadcasters, organizations representing television broadcasters, broadcast equipment manufacturers, and broadcast technical consultants, hereby jointly urge the Commission to consider formally the authorization of Distributed Transmission techniques for use in digital television operations. The Report and Order in the First Biennial Review of the rules governing Digital Television, MM Docket No. 00-39 indicated that the matter of the use of Distributed Transmission techniques (also called Single Frequency Networks) would be handled by the Commission with consideration of rules for digital operations by LPTV and DTV translator stations (¶ 63). It is our understanding that the Commission may shortly address these matters by issuing a Notice of Proposed Rulemaking with regard to such operations. We respectfully request that the issue of Distributed Transmission as herein described be considered in that NPRM.

Distributed Transmission is a technique that uses multiple transmitters sharing a channel to deliver a single digital television signal to consumers. It takes advantage of an element of all digital television receivers – the adaptive equalizer – to treat the signals from alternate transmitters as echoes of one another, which are then cancelled or combined in the adaptive equalizer. The advantages of this method are that (1) more uniform and higher level signals can be distributed over a wider area while causing less interference to neighboring operations, (2) gaps in coverage caused by terrain can be filled in, and (3) a variety of natural and man-made phenomena that inhibit reception of DTV signals in numerous situations can be overcome. Distributed Transmission also can enable set top

reception of DTV signals, potentially can make possible DTV reception in pedestrian and mobile applications, and in general can reach audiences more effectively and reliably, while using spectrum more efficiently because of the reduced interference caused outside service areas compared to powerful transmitters on tall towers.

The Advanced Television Systems Committee (ATSC) is currently developing standards to document the techniques necessary to synchronize transmitters, as must be done in Distributed Transmission Systems. The first multiple transmitter system is currently under construction using an Experimental License granted by the Commission.[1] Once the standard is adopted and testing of the synchronization system is completed, the Commission needs to have rules in place if the technique, which promises significant improvements to television broadcasting operations, is to be widely implemented. These comments urge expeditious consideration of Distributed Transmission by the Commission so that implementation can timely occur.

To enable the use of Distributed Transmission, the Commission must grant primary status to the multiple transmitters in Distributed Transmission Systems and license them under Part 73 of the Rules, as opposed to treating them similarly to LPTV, translator, and booster stations, which have secondary status under Part 74. Moreover, rules are needed regarding interference protection both from and to the signals from Distributed Transmission Systems, defining the locations where distributed transmitters are permitted to be situated, delineating the areas that may be served by distributed transmitters, establishing the methods to be used for interference analyses, and setting limits on the parameters allowed for distributed transmitters. A variety of additional technical regulations may be needed, which can be dealt with in the NPRM process.

It should be recognized that, while all of the organizations that are signatory to this letter support the fundamental concept of Distributed Transmission, they may differ on the specifics of how it may be implemented and will comment on such issues during the rulemaking process.

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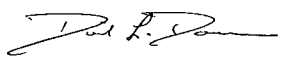
[1] WPSX-DT, Clearfield, PA, Channel 15, File No. BPEDT20000501AHR, and Experimental License with no call sign, State College, PA, Channel 15, File No. BEXP20010608ABD, both licensed to The Pennsylvania State University.

For the reasons stated above, the undersigned organizations respectfully request that the Commission include provisions for Distributed Transmission systems in a forthcoming Notice along the lines described in this letter.

Respectfully submitted,



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Susanna Zwerling, Legal Advisor, Office of Commissioner Copps
Catherine Bohigian, Legal Advisor, Office of Commissioner Martin
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NBC/Telemundo

- "The Commission should encourage stations to develop innovative means of serving larger populations on their existing channels through the distributed transmission or multiple transmitter systems, as long as those systems scrupulously protect other broadcasters." (p.2)

- Restate Commission should encourage, but not require "bona fide" technical innovations by broadcasters that see such innovations as playing a critical role in their ability to persuade consumers of the benefits of the digital environment.(p. 10)

- "The analysis of multiple transmitter systems appear to be particularly appropriate innovation to test during the transition, because Commission oversight and the nature of such systems should ensure that the most significant risk would be from "internal" interference, rather than more troubling interference from other stations. Accordingly, during the DTV, transition, stations could be sure that key programming reaches consumers through a traditional facility, while being able to experiment more freely with their second signal delivery system." (p. 10)

Harris Corporation

- "Harris does believe that the Commission will need to clarify its rules regarding power levels, interference, and other technical standards for these distributed transmission systems and broadcasters' other DTV repeater or booster facilities" (p. 7)

- "With regard to the appropriate technical standards, Harris believes that the Commission should require that all DTV translators, repeaters or boosters meet the same technical performance requirements as those for higher power DTV transmitters in order to ensure that the integrity of the digital transmission chain down to the consumer is maintained." (p. 7)

- "Harris also recommends that the Commission accord broadcasters primary service status and interference protection for their digital boosters or repeaters which transmit within the boundaries of their digital service contours." (p. 7)

Thomas C. Smith

- "The idea of using multiple transmitters is something that should be investigated. But, is there enough known to even answer the question asked in the notice concerning potential interference problems. I believe that it is too early to write rules to cover Distributed Transmission Technologies or on channel boosters. But, the FCC should allow the limited use of Special Transmitting Authority to test the theory. If someone wants to try using

multiple on-channel transmitters, let them try it. The same goes for on-channel boosters and translators." (¶ 14)

- "Secondary or primary status should be dependent on the service. Translators and boosters should be handled on a secondary basis as is now. On-channel transmitters used in a distributed transmission system should have primary status as long as the signal strengths of the normal coverage area of full power station." (¶ 15)

Belo Corporation

- "Finally, Belo urges the Commission to adopt rules expeditiously for the conversion of television translator stations to digital operations and the implementation of on-channel DTV boosters that can be used in a distributed transmission system." (p. 11)

Siete Grande Television

- "Nonetheless, based on the experience of operating a stable array for seventeen years the following parameters appear to be critical to achieving an integrated distributed transmission system that produces a single array." (p. 8)
  - The transmitters are being operated on the licensed main station's authorized frequency and nieet and exceed all requirements for carrier frequency tolerance.
  - The proposed facilities comply with the RFR guidelines in O.S.T. Bullentin No. 65.
  - The proposed operating powers do not exceed the power authorized to the licensed main station transmission facility.
  - The proposed grade B coverage is contained entirely within the licensed main station predicted grade B coverage.
  - Grant proposals would not be a major environmental action.
  - A preclusion study demonstrates no preclusory effect.
  - There will be an absence of interference to or from other existing stations.
  - Reliable service will be provided to viewers who are blocked by terrain.

Cox Broadcasting Inc.

- "The Commission should facilitate the expeditious development of distributed transmission technologies and not impede DTV innovations.""(p. 6)
- "Distributed transmission systems possibly could resolve DTV reception problems caused by multipath interference." (p. 6)
- "Cox further urges the Commission not to take any action that might impede or delay the introduction of this technology." (p. 6)

REPLY COMMENT SUMMARIES

Axcera, LLC

"Axcera wholeheartedly supports the concept of distributed transmission systems, and urges the Commission to establish rules to permit their use." (p 3)

Benefits of distributed transmission listed by Axcera: (p 3,4)

- Allows for filling of gaps in coverage.
- Efficient from a spectrum and power conservation standpoint.
- Can overcome limitations to DTV transmission progressed caused by the lack of availability of tall tower sites for centralized high power transmission.
- Can provide a measure of redundancy.
- Allows for a staged progression to full market DTV coverage.

"Axcera fully supports the position of the Merrill Weiss Group and others, that it is essential that the multiple transmitters making up a distributed transmitter system should be afforded primary status, and be authorized by simple licensing procedures under part 73 of the FCC rules." (p 5)

"Axcera believes that distributed transmitters should be permitted such that a station's service area extends to, and even beyond the Grade B contour of the stations' coverage area." (p 5)

"Axcera is in agreement with the comments of the Merrill Weiss Group on the subject of power and antenna height, in that the controlling parameter in providing limitations on distributed transmission systems should only be interference to neighboring stations." (p 6)

"...distributed transmitter networks should be addressed with the same [standards] that apply to single transmitter systems; that is, the *de minimis* limits of 2 percent reduction in population coverage reduction and 10 percent reduction from all interfering stations" (p 7)

"In addressing the question of what technical standards would be appropriate... the Commission should set rules for interference protection only." (p 7)

Cox Broadcasting Inc.

"Cox agrees with the rule changes identified by Merrill Weiss as necessary for rapidly accommodating distributed transmission systems." (p 2)

Cox wishes to highlight the analysis of Merrill Weiss regarding the measures the Commission must take to enable routine authorization

1. Promulgating a rule permitting a broadcaster to license more than one transmitter on the assigned allotment and specifying conditions and limitations under which additional transmitters could be licensed.

2. Codifying interference analysis methodology (presumably something akin to OET Bulletin No. 69) in a manner that would account for the lower power levels that distributive transmission systems can effectively use.

3. Revising construction permit applications form to allow for specifying that a proposed or modified transmitter is part of an identified distributed system, and

4. Determining how to adjust the use of call signs, if at all.

"Cox agrees with this analysis and urges the Commission to move as quickly as possible to implement such measures. The potential benefits of this innovation in broadcast technology warrant expeditious Commission action." (p3)

Harris Corporation

"The Commission should immediately adopt the A/65B PSIP standard and commence a rulemaking to establish rules for distributed transmission systems and digital boosters and repeaters." (p 8)

"In addition, most broadcasters agree with Harris with regard to the distributed transmission systems proposed in the NPRM, and also urge the Commission to establish quickly rules for digital booster and translator facilities." (p 8)

WPSX/Penn State Public Broadcasting

"WPSX the public television facility of The Pennsylvania State University, licensed to Clearfield, PA, is the recipient of an FCC experimental authorization to implement a digital television on-channel booster station in State College, PA. This system promises to be an economic technical solution to the difficulties we face in delivering sufficient signal levels to our constituents across the challenging terrain of our 29-county Central PA coverage area. We support MWG's position that upon successful implementation by WPSX, the distributed transmission technology should be permitted and relevant rules and policies established by the Commission.' (p 1,2)

Association for Maximum Service Television Inc. & NAB

"MSTV and NAB reiterate their strong support for the concept of distributed transmission and not that several parties have filed favorable comments on this technology. Nevertheless, there remain a number of critical issues to be resolved involving distributed transmission technology. For example, for such a system to work, individual transmitters would have to be given primary status, and interference protection for adjacent markets must be examined. Accordingly, MSTV and NAB again urge the Commission to move forward with its examination of this new technology in an expedited fashion to provide its utmost attention to any remaining questions involving the technology." (p 25)

Golden Orange Broadcasting Co. Inc.

"KDOC agrees with the technical analysis and conclusions tendered by the Merrill Weiss Group LLC." (p1)

"We believe, however, that there are other problems related to the methodology for determining site locations and radiation patterns for the proposed distributed transmitters that will require some regulatory flexibility to achieve effective result. Consequently, we submit our comments in support of an alternative method of establishing the overall geographic area within which distributed transmitters ought to be permitted." (p 2)

Mountain Terrain, obstacles to single transmitter model – Severe terrain existent in several large markets creates obstacles that could be overcome by distributed transmission. For example, the single high-power transmitter model may not be the best approach in Los Angeles due to long ranges of tall mountains isolating regions that would otherwise be within reach. With communities growing in size beyond the mountains, most stations are compelled to extend their services to those remote areas to stay competitive. (p 2,3)

Problems with Contour calculations – "we perceive a flaw in establishing an equivalent to computing the Grade B contour as the confines of all distributed signals. In Los Angeles under the NTSC rules, broadcasters are forced to design and utilize antenna patterns that provide large amounts of signal radiating toward areas cut off from direct service by mountains.

This is necessary in order to establish , on paper, a Grade B contour sufficiently extensive to allow the placement of boosters where they are need to enable service to the outlying and over-the-mountain communities." (p3,4)

Utilization of DMA as inclusive service area – "As the Merrill Weiss Group explained in its comments, an alternative in determining the acceptable sites for digital distributed transmitters would be preferable to the current method used in the terrestrial analog world. KDOC would go a step further in adding that such criteria ought to apply to both analog and digital services."

"We strongly favor utilization of the actual DMA by some reasonable formula, when it extends beyond the predicted B contour, as the preferred method for determining the location and maximum service area of distributed transmitters...In this context it is imperative that distributed transmitters be treated as primary so that if stations choose to utilize distributed transmitters in lieu of extending virtual contours on a piece of paper, they will get the same protection. We, therefore, encourage the Commission to adopt rules for distributed transmitters to be treated on a primary basis under part 73 rather than secondary in part 74." (p5,6)

Distribution of Transmitters and Energy Conservation – "Many California television stations, especially those on Mt. Wilson, are consuming approximately one-third more power and installing correspondingly larger transmitters than necessary primarily for the satisfaction of an administrative ritual." P (6,7)

"Distributed transmission networks can be an indispensable tool in bringing about the twin goals of expanded service and energy conservation." (p 8)

Tribune

"Tribune has an ongoing interest in the promise of distributed transmission systems as a way to improve digital reception, especially indoor reception, by providing a consistent signal strength across an entire DMA or at least the DMA's population center. Tribune also recognizes the long term spectrum efficiency that DT systems provide over the current high-powered, single broadcast transmitter model." (p 4)

"As part of these comments, MWG notes that if the Commission is serious about allowing broadcasters to use DT, it must give DT transmitters and the service those transmitters provide primary service. Tribune concurs in this assessment; no broadcaster can be expected to implement a DT system is the coverage it generates is not given the same protection that is provided to the coverage generated by a single, maximized transmitter. Tribune also supports the MWG proposal to use the pending ATSC standard as the technical reference for DT hardware implementation."

"Tribune supports a cautious implementation of DT systems by permitting a broadcaster to increase its protected DTV service areas using a DT system out to the limit of a theoretically maximized DTV facility using a single transmitter from the station's reference site assuming the highest power and HAAT allowed in the rules." (p5)

"Finally, the MWG comments identify a number of relatively minor changes to the FCC's interference rules and policies as well as its underlying database that are needed in order to allow DT systems to fit in the Commission's DTV processing regime, including proposals to calculate interference to and from a proposed DT systems and to apply the same 2% / 10% interference limit to DT systems. Tribune urges the Commission to fast track these needed procedural changes."